



Pictured above, a support team helps map trails at Fort Robinson. From left to right- Jerry Garris, Engineering; Tiffani Gerber, Engineering; Mike Morava, Fort Robinson - Park Superintendent; Fort Robinson's dog, Copper; Dave Hewitt, Fort Robinson - Assistant Superintendent.

Treckin' the Trail with a Trusty Trimble

GIS Mapping Project Ongoing Success Story

If you haven't ventured out on our website to experience our [GIS maps tool](#) ([Geographic Information System](#)) then you might want to consider dropping by the site next time you are looking for information about Nebraska parks and trails. What is GIS you might ask? Mobile GIS integrates GPS ([Global Positioning System](#)) technology, portable hardware platforms, and GIS software. To facilitate the flow of information to and from the field, mobile GIS solutions leverage advances in wireless technology and the internet. With Mobile GIS, data is directly accessible to field-based personnel whenever and wherever it is needed.

The State of Nebraska and the Game and Parks Commission spearheaded the concept of GIS trail mapping utilizing funding from the Recreational Trails Program (RTP) grants from administrative funds annually awarded through the Federal Highway Administration. The NGPC vision was to start with our state parks system and expand to building partnerships with communities along the way, allowing their trails to be included in the mapping for a more inclusive resource of trails for all users. Potentially, non-

state maintained trails can be included for a nominal fee as well. This time consuming task of mapping and monitoring the maze of trails would be a daunting task to most but not for the mapping teams who for the last six years have fine tuned the art of trail mapping.

A team of three Game and Parks staff members embraced the vision and adopted the project, diligently seeing each step through to the next challenge of the project. Michelle Stryker serves as the administrator of the RTP funds for Nebraska. She was on board with the idea as she saw it as an excellent use of funds. Utilizing evolving technologies and applications to provide up-to-date resource information about the state park system's recreational trails was definitely a win-win situation.

The next eager staff member to step up to the challenge was a solitary trail mapper, Virlyn Bolte. Bolte is tasked with documenting the distances, conditions and amenities along our park trails. Depending on the size of the particular park assigned to her she may set out on a solo trek or with a team on foot, horseback, four wheels or bike, trusty Trimble in hand. The Trimble GeoExplorer is a handheld GPS, which is like the "older brother" of the handheld GPS devices most consumers own. The GeoExplorer is an extremely precise GPS unit that allows Game and Parks to gather and document very accurate data on and about the trail. Once the data is collected, the third member of the team, Sudhir Ponnappan, Senior GIS Analyst in the Information Technology Division is then tasked with refining the exported data and inputting the location data into the interactive map so it can be utilized in a user friendly manner in our GIS mapping tool.

Once you are in the map you will be able to view information on several areas that have already been placed online. Those areas include 123 miles of trail. If you are out in the parks or on the trails you may catch a glimpse of Bolte as she is conducting her mapping. Bolte will be out this spring capturing as many trail miles as she and her trusty Trimble can log. The project's progress is ongoing and the hours and miles logged considerable. The team has 4 park areas to finalize and 23 areas left for the Trimble to track, along with 9 water trails that will also be logged into the system. The team fully understands the importance and significance of their efforts. The attention to detail and precision of information collected is critical in that they are the new pioneers setting protocol and standards for others states, agencies, and private sector groups.

When you use the map you will immediately become aware of the fact that, in addition to the basic trail information, the map also includes amenities found along or nearby the trails, such as benches, scenic points, restrooms and the location of all the trailhead facilities. Photographs along the trail, are also provided so trail users can more easily envision the trails prior while planning a visit.

Another feature going live in late April is one that handheld GPS users will appreciate. By that time the team hopes to have the information in a format that will allow individuals to download the information onto their personal handheld GPS devices for easier access. Printable maps are also being developed and will be available at the park areas as well as on the web site by May.

As the project unfolds additional perks are becoming evident as well. For emergency and catastrophic purposes when problems arise at a specific trail or a hazard such as a trees, bridges or lines down, it can be flagged immediately on the map.

This project has been a true collaboration and has fostered cross divisional cooperation and the benefits that implies; Parks, Engineering and Information Technology have all worked hand in hand to develop a sophisticated system that is an excellent data resource for the trails users, the individual park staff members and the engineers of our State Park System. This in turn, has provided insight for a wide variety of groups into the potential of GIS for other projects within the agency and across the state. Engineering has found a number of uses for the data that assists them with their planning, inventory, park maintenance and emergency procedural planning and implementation.

Currently Nebraska is the only state doing an overall inventory of trails and amenities as well as infrastructure and community partnering. While other systems may be surfacing, Game and Parks is leaps and bounds ahead of the game and has earned the bragging rights for the most user friendly and data rich source of information currently available on the trails they have logged, mapped and published.

For more information on the trail mapping project contact: Michelle Stryker via email at michelle.stryker@nebraska.gov